

MAR 29 2012

**510(k) Summary of Safety and Effectiveness**

Proprietary Name: Hoffmann LRF (Limb Reconstruction Frame) System

Common Name: External Fixation Device

Classification Name and Reference: Single/multiple component metallic bone fixation appliances and accessories 21 CFR §888.3030

Regulatory Class: Class II

Product Codes: 87 KTT-Appliance, fixation, nail/blade/plate combination, multiple component

For Information contact: Estela Celi, Regulatory Affairs Associate  
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Date Prepared: November 8, 2011

**Description:**

This Traditional 510(k) submission is being supplied to the U.S. FDA to provide authorization to market the new Hoffmann LRF (Limb Reconstruction Frame) System. The Hoffmann LRF System is an external fixation device that consists of Carbon and Aluminum Full/Open rings and ring segments, Aluminum foot rings, threaded rods and threaded rod connecting nuts, telescopic struts, static struts and connection bolts, posts and connecting nuts, wires and wire bolts, wire bolt offset adapters, pin bolts and pin adapters, and washers. This external fixation system may also be used with the components in other Howmedica Osteonics external fixation systems such as the Monticelli Spinelli External Fixation System, the Hoffmann II MRI External Fixation System, and the Stryker Trauma Pelvic Set and in conjunction with commercially available Apex Pins, Hoffmann II External Fixation 90° Post, Carbon Connecting Rod and Miami Post.

**Intended Use:**

The Hoffmann LRF (Limb Reconstruction Frame) System is intended for fixation of fractures, joint contractures, fusions, limb lengthening, deformity correction, bone and soft tissue reconstruction in pediatric patients and adults.

**Indications:**

The Stryker Hoffmann LRF (Limb Reconstruction Frame) System is indicated in pediatric patients and adults for the treatment and fixation of:

- Open and Closed Fractures
- Post-traumatic joint contracture which has resulted in loss of range of motion
- Fractures and disease which generally may result in joint contractures or loss of range of motion and fractures requiring distraction
- Pseudoarthrosis or non-union of long bones
- Limb lengthening by epiphyseal or metaphyseal distraction
- Correction of bony or soft tissue deformity
- Correction of segmental bony or soft tissue defects
- Joint arthrodesis
- Management of comminuted intra-articular fractures of the distal radius

The Stryker Hoffmann LRF System is indicated in adults for:

- Osteotomy
- Revision procedure where other treatments or devices have been unsuccessful
- Bone reconstruction procedures
- Fusions and replantations of the foot
- Charcot foot reconstruction
- Lisfranc dislocations

**Summary of Technologies:**

Device comparison showed that the proposed device is substantially equivalent in intended, use, materials and performance characteristics to the following predicate devices:

- K031181 External Fixation Systems (Smith & Nephew)
- K041706 Hoffman II Foot Ring
- K003018 Titan Tibial Nail (T2 Nail)

**Non-Clinical Testing:**

Non-clinical laboratory testing was performed for the Hoffmann LRF (Limb Reconstruction Frame) System components to determine substantial equivalence. Non-clinical testing was performed with compliance to ASTM F1541-02 – “Standard Specification and Test Methods for External Skeletal Fixation Device.” Static and dynamic frame testing was performed. Wire Strength, Compression, Bending, Slipping and Splitting testing was also performed on the frame components. Testing demonstrated that the Hoffmann LRF (Limb Reconstruction Frame) System is substantially equivalent to devices currently cleared for marketing.

**Clinical Testing:** Clinical testing was not required for this submission.

**Conclusion:** The Hoffmann LRF (Limb Reconstruction Frame) System is substantially equivalent to the predicate devices identified in this premarket notification.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room - WO66-G609  
Silver Spring, MD 20993-0002

Howmedica Osteonics Corporation  
% Ms. Estela Celi  
Regulatory Affairs Associate  
325 Corporate Drive  
Mahwah, New Jersey 07430

MAR 29 2012

Re: K113327  
Trade/Device Name: Hoffmann LRF (Limb Reconstruction Frame) System  
Regulation Number: 21 CFR 888.3030  
Regulation Name: Single/multiple component metallic bone fixation appliances and accessories  
Regulatory Class: Class II  
Product Code: KTT  
Dated: March 15, 2012  
Received: March 16, 2012

Dear Ms. Celi:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

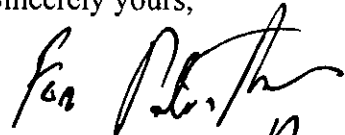
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21

CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions.(Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

  
Mark N. Melkerson *Dep. Dir.*  
Director *O.R.*  
Division of Surgical, Orthopedic  
and Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

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### Indications for Use

510(k) Number (if known): K113327

Device Name: Hoffmann LRF (Limb Reconstruction Frame) System

#### Indications for Use:

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- Lisfranc dislocations

Prescription Use   X    
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use         
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF  
NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

  
\_\_\_\_\_  
(Division Sign-Off)

Division of Surgical, Orthopedic,  
and Restorative Devices

510(k) Number   K113327